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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/248,371	02/08/1999	ANTHONY M. LOVELL	10525/003001	8678

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EXAMINER	
PHILPOTT, JUSTIN M	
ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 09/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/248,371	LOVELL ET AL.	
	Examiner	Art Unit	
	Justin M Philpott	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 February 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-67* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-67* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 February 1999* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5-9* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawings are objected to by the Draftsperson for reasons cited on Form PTO-948 included herein. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. Furthermore, the drawings are objected to under 37 CFR 1.83(a) because they fail to distinguish payload portion 220 from list 240 in FIG. 5 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because it is unclear where the transition between the detailed description of FIG. 3 and FIG. 4 occurs. Please insert a reference to "FIG. 4" in the paragraph on page 5 beginning with line 24 and ending with line 30.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 6, 12, 43, 48 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,864,559 to Perlman.

Regarding claims 1 and 43, Perlman teaches transmitting a data block over a network (col. 6, lines 48-52) from a first sending node (e.g. node 124, see FIG. 1) to a first set of recipient nodes (102, 105-107 and 122-123) comprising dividing the first set of recipient nodes into a subset of selected nodes (122 and 123) that are selected according to scoring criteria associated with each recipient node (wherein scoring criteria is based on cost of each path in a spanning tree configuration commonly known in the art, see col. 3, lines 13-27) and a subset of unselected nodes (102 and 105-107), assigning at least one of the unselected nodes to at least one selected node (e.g., unselected node 105 assigned to selected node 122) according to scoring criteria associated with the respective selected nodes, and transmitting to each selected node a packet including the data block (col. 6, line 52) and a first list of the nodes assigned to the selected node (see col. 5, line 67 regarding "list").

Regarding claims 6 and 48, Perlman discloses criteria comprising the effective bandwidth (see col. 3, lines 13-20 regarding "volume of traffic").

Regarding claims 12 and 53, Perlman further teaches the elements of claim 1 in a second sending node (e.g., node 127).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 7-10 and 49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman.

Regarding claims 7-8 and 49-50, Perlman teaches scoring criteria according to the spanning tree method commonly known in the art (col. 3, lines 13-20). While Perlman does not specifically disclose this criteria comprising latency and time between sending and receiving packets, such network characteristics are known in the art to be used in determining cost. Perlman uses costs as scoring criteria, thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to utilize latency and time between sending and receiving packets as part of the scoring criteria.

Regarding claims 9-10 and 51-52, Perlman teaches data packets defined as "messages which carry information or data which is not related to network operation" (col. 6, lines 50-52). While Perlman does not specifically disclose these data packets as comprising audio or video data, this definition of Perlman encompasses and anticipates such data types for transmission in the disclosed communications system. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to include audio and/or video data in the data packets.

8. Claims 2-5, 11, 13-42, 44-47 and 54-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of U.S. Patent No. 5,787,083 to Iwamoto et al.

Regarding claims 2 and 44, Perlman teaches the system described above, however, does not specifically disclose each unselected node directly assigned to at least one selected node (e.g., unselected node 107 is not directly assigned to selected node 123, rather is indirectly assigned through node 102). Iwamoto teaches a network comprising a group of selected nodes (switch nodes 101-103, see FIG. 1) and a group of unselected nodes (terminals Pa-Pe) with a broadcasting source (104). The network of Iwamoto clearly indicates each unselected node being assigned to at least one selected node. Furthermore, applying the organized arrangement of Iwamoto with the system of Perlman would provide improved control means for data transfer. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Iwamoto to the system of Perlman.

Regarding claims 3, 45 and 56, Perlman teaches the elements of claim 1 as described above which includes the transmitting by, and receiving from, a first sending node (node 124, see FIG. 1) a packet including a data block (col. 6, line 52) and a first list of assigned nodes (col. 5,

line 67), and also includes the use of scoring criteria (col. 3, lines 13-27) to regulate steps of dividing and assigning. Perlman, however, does not specifically teach a step of further dividing the first list of assigned nodes into subsets of selected assigned nodes and unselected assigned nodes. Iwamoto teaches a network which can be applied to the system of Perlman to provide improved control means as described above. The network of Iwamoto further comprises dividing the first list of assigned nodes (member list, col. 4, line 52) into a subset of selected assigned nodes and a subset of unselected assigned nodes (see col. 4, line 28 to col. 5, line 3 – particularly col. 4, lines 62-67 regarding the member list being divided into branching groups), re-assigning each of the unselected assigned nodes (Pb-Pc and Pd-Pe) to at least one selected assigned node (102 and 103, respectively) (see col. 5, lines 4-17 regarding editing the member list), and transmitting to each selected assigned node a packet including the data block and a list of the nodes re-assigned to the selected assigned node (see the above Perlman in view of Iwamoto regarding the data block, and see col. 5, line 43 to col. 8, line 38 regarding transmission of edited member list). Therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the above teachings of Iwamoto to the system of Perlman in order to provide an improved communications system.

Regarding claims 4 and 46, Iwamoto further teaches a network wherein the at least one recipient node includes at least two recipient nodes (e.g., nodes 101 and 102).

Regarding claims 5 and 47, Iwamoto further teaches generating a discernable output reflecting information in the data block (col. 1, line 63 regarding "broadcast").

Regarding claim 11, Perlman in view of Iwamoto teaches the elements of claim 2 as described above. Iwamoto further teaches each unselected node (Pa-Pb) assigned to only one selected node (101-103).

Regarding claims 13 and 14, see the above regarding claim 12 and claim 3.

Regarding claim 15, see the above regarding claim 14 and claim 2.

Regarding claim 16, see the above regarding claim 14 and claim 4.

Regarding claim 17, see the above regarding claim 14 and claim 5.

Regarding claim 18, see the above regarding claim 14 and claim 6.

Regarding claims 19-20, see the above regarding claim 14 and claims 7-8.

Regarding claims 21-22, see the above regarding claim 14 and claims 9-10.

Regarding claim 23, see the above regarding claim 15 and claim 11.

Regarding claim 24, Iwamoto discloses the network as applying to ISDN switching networks (col. 2, lines 30-31) which anticipates the use of a computer program product residing on a computer readable medium comprising instructions. Regarding all other elements of claim 24 see the above regarding claim 1.

Regarding claim 25, see the above regarding claim 24 and claim 2.

Regarding claim 26 and 34, see the above regarding claim 24 and claim 3.

Regarding claim 27, see the above regarding claim 24 and claim 5.

Regarding claim 28, see the above regarding claim 24 and claim 6.

Regarding claims 29-30, see the above regarding claim 24 and claims 7-8.

Regarding claims 31-32, see the above regarding claim 24 and claims 9-10.

Regarding claim 33, see the above regarding claim 25 and claim 11.

Regarding claim 35, see the above regarding claim 34 and claim 2.

Regarding claim 36, see the above regarding claim 34 and claim 5.

Regarding claim 37, see the above regarding claim 34 and claim 6.

Regarding claims 38-39, see the above regarding claim 34 and claims 7-8.

Regarding claims 40-41, see the above regarding claim 34 and claims 9-10.

Regarding claim 42, see the above regarding claim 35 and claim 11.

Regarding claim 54, see the above regarding claim 45. Furthermore, Perlman teaches at least one sending node (e.g., node 124).

Regarding claim 55, see the above regarding claim 54 and claim 11.

Regarding claim 57, see the above regarding claim 56 and claim 2.

Regarding claim 58, see the above regarding claim 56 and claim 4.

Regarding claim 59, see the above regarding claim 56 and claim 5.

Regarding claim 60, see the above regarding claim 56 and claim 6.

Regarding claims 61-62, see the above regarding claim 56 and claims 7-8.

Regarding claims 63-64, see the above regarding claim 56 and claims 9-10.

Regarding claims 65, see the above regarding claim 56 and claim 12.

Regarding claim 66, see the above regarding claim 56 and claim 54.

Regarding claim 67, see the above regarding claim 56, claim 11 and claim 3.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,856,976 to Hirano teaches a multiplex communications system whereby nodes are divided into groups and individual nodes are selected according to particular criteria,

U.S. Patent No. 5,999,517 to Koning et al. teaches dividing nodes into a plurality of groups and storing routing information, and

U.S. Patent No. 6,385,201 to Iwata teaches a hierarchical network wherein a plurality of interconnected nodes are divided into a plurality of groups.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9314 for regular communications and 703.872.9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.4750.

Justin M Philpott

jmp
September 10, 2002

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600